

PAPER • OPEN ACCESS

Millennials: is 'green' your colour?

To cite this article: J P Bernardes *et al* 2018 *IOP Conf. Ser.: Mater. Sci. Eng.* **459** 012090

View the [article online](#) for updates and enhancements.



IOP | ebooks™

Bringing you innovative digital publishing with leading voices to create your essential collection of books in STEM research.

Start exploring the collection - download the first chapter of every title for free.

Millennials: is ‘green’ your colour?

J P Bernardes¹, F Ferreira¹, A D Marques¹ and M Nogueira²

¹Universidade do Minho, Escola de Engenharia, Departamento Têxtil, Campus de Azurém, Guimarães, Portugal.

² IPAM - Universidade Europeia, Rua Manuel Pinto Azevedo 748, Porto, Portugal, joaopedro_bernardes11@hotmail.com

Abstract. Millennials are defined as the group of people born between 1980 and 2000 and maintain a positive attitude in relation to sustainability. However, there is a contradiction between how Millennials think and act when it comes to sustainable consumption. It is interesting to determine which factors can influence their sustainable attitude and behaviour, and those influences can be personal and situational. Six different factors were selected from the literature review and were subject of analysis. The research method will be through three different focus groups with Millennial participants. After the analysis of the focus groups it was possible to understand that Millennials show a very positive attitude towards sustainability but this attitude is not translated in ‘green’ footwear purchasing behaviour.

1. Introduction

The ecological footprint that humans leave on Earth is a complex concept and it embodies the space that each of us takes up on the planet, how does it become necessary to produce to satisfy the individual consumption, the amount that each individual consumes of energy and the waste produced by each person in a certain space of time [1]. It is necessary to use the natural resources of our planet with enough awareness, so that future generations are not affected by the current lack of sustainable planning [2]. Associated to a sustainable development is the concept of sustainable product. This concept can be misleading because the impacts that any product has on social and ecological environment depends not only of its production, but also of its use by consumers [3]. In fact, the attitude and behaviour of consumers are in line with the rapid production. Encouraged by low prices and heavily influenced by marketing campaigns and constant changes of trends, consumers tend to speed up their fashion consumption [4]. Consumption of footwear in Portugal increased in 2016 to 57 million pairs, the highest figure in the last six years. In 2017 Portugal produced 82 million pairs of footwear and is an industry that now accounts for 3.4% of value added in Portuguese manufacturing industry [5]. Experts blame fast fashion for the dramatic expansion of our wardrobes [6]. Consumers are an important part of the fashion system and can create a valuable influence in the pursuit of sustainability in the fashion industry. [4]. The younger consumers, the generation Y (Millennials), is defined as a group of people born between 1980 and 2000 [7] and maintain a positive attitude in relation to sustainability in general. However, there is a clear contradiction between how Millennials think about sustainability and what they do when it comes to a sustainable consumption [8].

Since only studying the ‘green’ attitudes will not produce conclusive results on the behaviour of young consumers to buy sustainable products, it is interesting to determine what factors influence the attitude-behaviour relationship. Several studies suggest that there is a difference of attitude of ‘green’ purchasing behaviour due to the complex nature of personal and situational influences [9]. Personal factors are internal influences. The attitude is a personal factor important in the purchase of sustainable products but doesn't explain why the young



consumers don't buy this type of products. Other examples are awareness, trust, priorities, emotion and control [9]. Situational influences are the external influences that a person cannot control, but which affect the relation attitude-behaviour. Examples are: time, opportunity, money or the ability to perform the desired behaviour [10].

2. State of Art

Millennials' purchasing power is rising and will be at its peak between the period of 2020 and 2050 [11]. The methodology adopted in this paper is qualitative through the use of three focus group, all participants still with no established purchasing power, but they will be the adult consumers of the next 30 years. So, for companies its necessary to understand them now, in order to know how to establish lasting connections in the near future. In order to understand Millennials, some influencing factors were selected and will be further subject of analysis throughout this paper, and they are:

2.1. Consumption habits

Habits are behavioural routines that are repeated regularly and tend to develop subconsciously. A habit is a fixed form of thinking, acting or feeling and is determined by the repetition of a prior experience. When a behaviour is often performed, can conduct an immediate behaviour under the control of a usual process [12].

2.2. Economic availability

The author [9] perceives a relationship between income and ecological footprint. Consumers with higher incomes have a negative footprint, while consumers with lower income have a positive footprint. The price of 'green' products depending on the economic availability is the most common barrier for consumers not buying 'green' products or services. However, the amount of expendable money also seems to be a personal factor since it is related to the willingness to pay a certain price [13].

2.3. Physical availability

The physical availability of 'green' products in relation to the time that a consumer has or is willing to spend on shopping, influences the amount of 'green' purchases 'made. Physical availability is related to the ease or difficulty of obtaining or consume a certain product. Consumers want to find sustainable products in regular stores, alongside conventional products [14].

2.4. Personal Benefits

Personal benefits refer to the efforts that a person has to do to satisfy their needs and desires. Consumers will assess whether the expected behaviour corresponds with their own personal concerns. There is the tendency to decide in favor of their own interests, which is thus related to the fact that consumers often fail to estimate the actual impact of buying 'green' in their lives [15]. A consumer will buy a 'green' product, when in addition to the environmental benefit, they realize some benefit individual direct in acquiring the product [16].

2.5. Consumer Consciousness

This factor is defined as the amount of time that was spent in the processing of information about 'green' and sustainable products. It is important that consumers are aware of the fact that buying 'green' can be a criterion of purchase and should also pay attention to the communication of organizations about products of this type [17]. Consciousness holds a key role in the acquisition of sustainable products and is a bonus when making a 'green' purchase. When consumers are not aware of the existence of these types of products, they will never be able to form strong attitudes and intentions regarding the purchase of sustainable products. So, the level of consciousness influences the relationship between 'green' attitudes and purchase intentions [18].

2.6. *Personal perceived importance*

The personal perceived importance is a type of attitude that explains whether consumers consider sustainability issues important to them, or as a problem of society as a whole. So, the self-involvement level with the environment determines the amount of 'green' purchases consumers do. Consumers can have a very positive attitude in relation to sustainability, but at the same time feel that the preservation of the environment isn't their responsibility [19].

As will be explained in the next section of this paper (3. Methodology), this paper will analyze each of the influencing factors stated above through the focus group methodology [20].

3. Methodology

The main goal of this paper is to study the Generation Y's perceptions regarding sustainability and their 'green' consumption habits of footwear in Portugal. The research method will be through the analysis of three focus group only with a total of 30 Millennial participants. The analysis of the focus groups allows a better understanding between the gap of what Millennials think about sustainability and how they perceive it, with their actual consumption habits regarding footwear. In order to design a solid focus group, the influencing factors selected from the literature review will be further subject of analysis on the focus groups. This paper will analyze each of the influencing factors allowing a better understanding of the Generation Y's sustainability perceptions and consumption habits in the footwear industry in Portugal.

4. Results and Discussion

4.1. *Millennials perceptions on sustainability and 'green' products*

This first section of the discussion is focused in understanding Millennials' thoughts on sustainability and 'green' products in general. After these first three questions is the analysis and results to each of the influencing factors selected from the literature review. All of the questions below were asked in the three focus groups.

What do you think sustainability means?

Some of the participants only mentioned the waste that a person leaves behind but the majority agreed that "Sustainability is all about balance. Its using the resources in a way that satisfies our needs and at the same time it doesn't harm the future generations". Every participant seemed to understand the concept of sustainability concerning the environmental aspect, but lacked to mention the social and financial pillars inherent to the concept. A more complex and complete definition of Sustainability was explained to them in order for them to fully understand the following questions.

Who do you consider the main responsible for sustainability? How/Why?

Every participant agreed that the main responsible are the Humans. They justified by saying that "We are the main users of its natural resources and the only ones with the ability to manage them." But they also felt like the responsibility isn't all on the consumer, stating that "our buying habits and behaviours are a reflection of the education that has been given to us by society". They explained that they don't feel educated enough by brands and companies: "The impacts of every purchase needs to be explained to consumers, so that we can make an informed and aware decision and know what the real repercussions of our actions are. Brands should worry about educating consumers more than selling to consumers".

What are your thoughts on 'green' products? Why?

Every participant described 'green' products as a product with higher quality but also higher prices. And "due to these higher prices, we opt for the easiest and more convenient choice and don't pay attention to a more sustainable alternative". The long-term personal benefits from consuming 'green' are outweighed by the financial aspect. And also "When we think of green' products, what comes to mind are always non-appealing products. There is still a lot to explore in terms of production and design. This stigma has to change and we need to be reeducated".

Answers were divided in this question. Some of the participants said “Yes” because they choose to buy fruits and vegetables directly in farms or local producers but the majority answered negatively. Regarding the benefits from consuming ‘green’, Millennials answered that “there are a lot of health related long-term benefits in consuming ‘green’ products, but right now we don’t have the financial power to do so”.

4.2. Millennials’ influencing factors in purchasing ‘green’ footwear

The next section of the discussion is the analysis of each of the influencing factors regarding the consumption of ‘green’ footwear:

4.2.1. Consumption habits

Do you have the habit of buying sustainable footwear? Why/Why Not?

Every participant responded negatively with the opinion that footwear brands should offer a quality guarantee for their products, with maintenance and repair services due to the materials, therefore justifying the higher prices. Also, it would be very important if brands explained and educated consumers on why a certain model is more durable and sustainable (materials, production and process). One big barrier from buying ‘green’ footwear comes from the lack of communication between consumers and brands. They are not aware if footwear brands have or haven’t got ‘green’ lines, and they believe this is the brand’s fault and not only theirs.

Would you be able to start buying ‘green’ footwear?

“Yes” was the answer from everyone. They justified by saying that “it lasts longer, has higher quality and you’re helping not only yourself but the environment”. The main barrier that is still keeping them from acting on their positive attitude towards sustainable consumption are the higher prices.

4.2.2. Economic Availability

Do you think ‘green’ footwear is worth the extra financial effort? Why/Why Not?

All responded positively but only if the price isn’t much higher than ‘normal’ footwear: “Nowadays prices between regular and ‘green’ products are very different. A slightly higher price seems fair because of the sustainable materials inherent in producing a ‘green’ shoe. We know it will last longer, it’s an investment, but not if the prices are as high as they are now”.

4.2.3. Physical Availability

Can you identify any footwear brand with a ‘green’ line at stores or online?

This factor also had unanimity because no participant was able to name a sustainable footwear brand and therefore they don’t have the ability to identify a ‘green’ footwear model. They said that “We can’t spot a ‘green’ shoe so we don’t really know if we’ve seen one before”.

4.2.4. Personal Benefits

What are the personal benefits you believe there are in consuming ‘green’ footwear? Why?

To this question there were two important statements, shared by two participants but with general agreement by everyone were: “Health. Not only ours but everyone else’s, because in consuming ‘green’ we are reducing our ecological footprint thus helping the planet”; “Space for all. Because the less we consume, the less it’s produced to satisfy the individual consumption. And with less production, the less waste and less space we take in our planet”.

4.2.5. Consumer Consciousness

When it comes to producing footwear, what are the materials you think are the most eco-friendly? And the least?

Participants felt uncertain with this topic so only a few answered this question. Their answers to the most eco-friendly materials were “Cotton”, “Cork” and “Synthetic leather”. Regarding the least they responded “Leather”. It is clear that they don’t search for this type of information and therefore have very limited knowledge in sustainable materials.

Before buying footwear, do you see if it's made with sustainable materials? Why/Why Not?

To this question none of the participants answered positively. This is due to their lack of research on the matter and therefore they can't detect a sustainable shoe from a regular one.

Before buying footwear what are the aspects that can influence more your purchasing decision?

Every participant agreed that the design is the aspect that influences the most when they are buying footwear. Following the design comes the price and then the comfort. The materials were not even mentioned.

4.2.6. Personal Perceived Importance

How important is eco-friendly footwear to you and to the pursuit of sustainability?

They feel that it is "Very important. The term 'friendly' says it all. Sustainable products can improve not only our quality in living but also everyone else's lives". Another participant added that "We know we need to consume in a more sustainable way, but in order to do that we need products that appeal to us. Specially if its fashion! It's not only what the materials are, but how the whole design of the shoe is. We won't buy a product we don't like just because of its impacts of the environment. It has to be a win-win situation and companies still fail to understand that". One student even said that "If I have two identical shoes to choose from, one being sustainable and the other one not, with identical prices, I would opt for the sustainable model without a doubt". Millennials feel that they are very limited choices in sustainable fashion and that, allied to the high price, are the main barriers that prevent them from living a 'greener' lifestyle.

5. Conclusions

After selecting and analyzing the influencing factors that can positive or negatively impact the gap between Millennials' attitude and behaviour concerning sustainability and sustainable fashion, some interesting conclusions are now possible to obtain. Portuguese Millennials are fully aware of their role in society and therefore know that they should consume 'green' and that by doing so they are contributing positively to the environment and improving their lives as well. However, Millennials don't spend too much time researching for sustainable alternatives and have very little knowledge in the matter. In their opinion, the blame for this lack of education is not only theirs but also the brands'. Discussing with them was possible to see that no participant was able to identify a sustainable footwear brand, but showed great interest in buying a 'green' pair of shoes if only there were more options to choose from and the prices are not much higher than 'regular' footwear. It was possible to note that the extra financial effort that is inherent in buying sustainable footwear doesn't justify the personal benefits of being 'green'. Millennials want to be 'green', but they can't afford to be 'green'. They also felt that, even though they don't buy 'green', they can be if they consume in a smart way. One of the participants even added that "consumers don't need to have all of their pairs of shoes made with sustainable materials, but if they are taken care of they can last longer. Maintenance is key in achieving a more sustainable lifestyle too. It's all about balance".

After analyzing the factors above it is possible to conclude that even though Portuguese Millennials have a very positive attitude towards sustainability and 'green' products, this attitude is not reflected in actual behaviour. The main limitation of this study is that the results from the analyzed sample are 100% Portuguese, therefore it is not possible to extrapolate these results to other countries. Even though it is the same generation worldwide, each culture has its own impacts on the Millennials education, and therefore, consumption habits. As future research it would be very interesting to add 'Marketing Efforts' as an influencing factor by analyzing the marketing strategies done by sustainable footwear brands and how they engage with the Millennial generation. Also, it would be interesting to study different ways to increase consumer awareness in what comes to buying 'green', having the 'Marketing Efforts' factor as the starting point.

Acknowledgments

“This work is financed by FEDER funds through the Competitiveness Operational Programme - COMPETE and by national funds through FCT – Foundation for Science and Technology within the scope of the project POCI-01-0145-FEDER-007136”.



References

- [1] Kiperstok A 2005 Sustentabilidade ambiental: produção e consumo; I congresso internacional de cooperação universidade-indústria UNINDU Brasil
- [2] Canciglieri J R, Cardoso R and Pereira S 2011 Uma Visão Tecnológica sobre o Desenvolvimento de Produtos e a Sustentabilidade. Congresso Brasileiro de Gestão de Desenvolvimento de Produto, Porto Alegre.
- [3] Stegall N 2006 Designing for Sustainability: A Philosophy for Ecologically Intentional Design. *Design issues* **22** p 96.
- [4] Birtwistle G and Moore C M 2006 Fashion adoption in the UK: a replication study. Paper presented at the Anzmac Conference, Brisbane, CA.
- [5] APPICAPS 2017 Retrieved on June 2018. Available at: <https://www.apiccaps.pt/publications/plano-estrategico/116.html/>
- [6] Dirksen K 2008 Fashion guide I: Slow Fashion. Retrieved on June 2018. Available at: <http://faircompanies.com/news/view/fashion-guide-i-slow-fashion>
- [7] Zemke R 2001 Here come the Millennials. *Training Magazine* **38** (7) p 44-49.
- [8] Cui Y, Trent E, Sullivan P and Matiru G 2003 Cause-related marketing: How Generation Y responds. *International Journal of Retail & Distribution Management* **31** (6) 310-320.
- [9] Csutora M 2012 One more awareness gap? The behaviour–impact gap problem. *Journal of consumer policy* p 1- 19.
- [10] Ajzen I 2012 The theory of planned behavior. In P A M Lange, A W Kruglanski and E T Higgins (Eds.), *Handbook of theories of social psychology* **1** p 438-459 London UK.
- [11] Forbes 2014 Retrieved on June 2018. Available at: The 10 social and tech trends that could shape the next decade. Available at: <http://www.forbes.com/sites/sarwantsingh/2014/05/12/the-top-10-mega-trends-of-the-decade/2/#47cbd7e55eae>.
- [12] Ajzen I, Czasch C and Flood M G 2009 From Intentions to Behavior: Implementation Intention, Commitment, and Conscientiousness. *Journal of Applied Social Psychology*, **39** (6) p 1356-1372.
- [13] Bray J, Johns N and Kilburn D 2011 An exploratory study into the factors impeding ethical consumption. *Journal of Business Ethics* **98** (4) p 597–608.
- [14] Vermeir I and Verbeke W 2006 Sustainable food consumption: Exploring the consumer “attitude–behavioral intention” gap. *Journal of Agricultural and Environmental Ethics*, **19** (2) 169-194.
- [15] Rokka J and Uusitalo J 2008 Preference for green packaging in consumer product choices – do consumers care? *International Journal of Consumer Studies* **32** p 516–25.
- [16] Nottage A 2008 The green agenda gets personal. *Marketing* July p 33–5.
- [17] Jones S and Eden C 1981 OR in the community. *Journal of the Operational Research Society* p 335-345.
- [18] Silva C and Souza T M 2012 Desenvolvimento de Sistema para Dimensionamento do Aquecedor Solar Popular de Água - *Revista Sodebras* **7** (3) January.
- [19] Larocche M, Bergeron J and Barbaro-Forleo G 2001 Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of consumer marketing* **18** (6) p 503-520.
- [20] Krueger R and Casey M 2009 Focus Groups A Practical Guide for Applied Research, 4th edition SAGE Publ. Thousand Oaks CA *Harvard Business Review* **37** p 117– 124.